

## SBIRS Low

### -- History --

Originally conceived during the 1980s Strategic Defense Initiative or “Star Wars” era, the Low Earth Orbit (LEO) component of today’s SBIRS architecture has changed and adapted to evolving threats. The SBIRS Low component will bring an entirely new capability to the warfighter — the ability to track missiles from launch to re-entry and to relay necessary cueing data to missile interceptors before the missiles reach friendly forces.

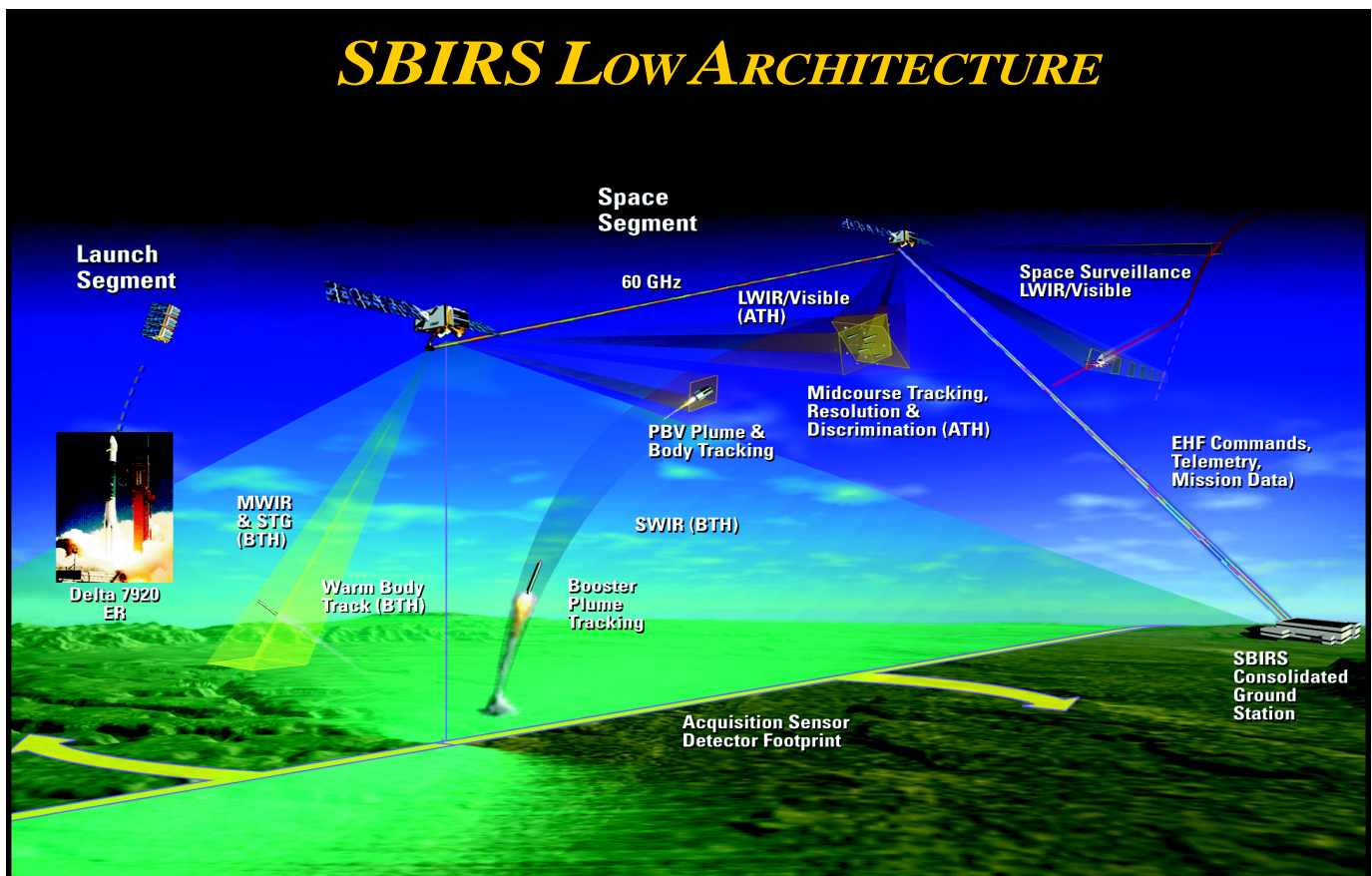
### -- Concept --

When fully operational, the SBIRS Low component will consist of greater than 20 satellites in Low Earth Orbit and will work in conjunction

with SBIRS High to provide full global coverage. The primary function of SBIRS Low is to provide precise mid-course tracking and discrimination of objects for the SBIRS **MISSILE DEFENSE** mission in theater conflicts and attacks against North America. In addition, with its low altitude putting it physically closer to the battlefield and thus allowing for higher resolution, the SBIRS low program is well suited to enhance the other three SBIRS missions of **MISSILE WARNING, TECHNICAL INTELLIGENCE AND BATTLESPACE CHARACTERIZATION**.



Each satellite will contain two infrared sensors to perform its missions. One sensor, known as the Acquisition Sensor, will be a wide field of view scanning infrared sensor utilizing SWIR technology to watch for bright missile plumes during boost phase. Once the acquisition sensor has located a



The SBIRS Low architecture will consist of 20-30 satellites in low Earth orbit each utilizing two infrared sensors in multiple wavebands to acquire and track objects. Information on events will be sent throughout the constellation via the inter-satellite crosslinks and also relayed to the consolidated SBIRS ground processing station.